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Material Safety Data Sheet

EMERGENCY NUMBERS:

(USA) CHEMTREC : 1(800) 424-9300 (24hrs)
 (CAN) CANUTEC : 1(613) 996-6666 (24hrs)

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: E		Not controlled under TDG (Canada). PIN: Not applicable. PG: Not applicable.
		

Section I. Product Identification and Uses

Product name	HYDROCHLORIC ACID, <0.1% W/W	CI#	Not available.
Chemical formula	HCl	CAS#	7647-01-0
Synonyms	HA001	Code	HA001
		Formula weight	36.46
		Supersedes	
Material uses	For laboratory use only.		

Section II. Ingredients

Name	CAS #	%	TLV
1) HYDROCHLORIC ACID (as HCl)	7647-01-0	<0.1	Exposure limits: ACGIH Ceiling limit 2 ppm Not established by ACGIH
2) WATER	7732-18-5	Balance	

Toxicity values of the hazardous ingredients	<p>HYDROCHLORIC ACID: ORAL (LD50): Acute: 900 mg/kg (Rabbit). VAPOR (LC50): Acute: 3124 ppm (Rat) (1 hour(s)). 1108 ppm (Mouse) (1 hour(s)). VAPOR (LCLo): Acute: 1300 ppm (Human) (30M).</p>
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Section III. Physical Data

HYDROCHLORIC ACID, <0.1% W/V

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Physical state and appearance / Odor	Colorless fuming liquid with a pungent odor.
pH (1% soln/water)	<7
Odor threshold	5-10 ppm
Percent volatile	100% (V/V)
Freezing point	Not available.
Boiling point	Not available.
Specific gravity	Not available.
Vapor density	1.3 (Air = 1)
Vapor pressure	Not available.
Water/oil dist. coeff.	Not available.
Evaporation rate	Not available.
Solubility	Miscible in water.

Section IV. Fire and Explosion Data

Flash point	Not applicable.
Flammable limits	Not applicable.
Auto-ignition temperature	Not available.
Fire degradation products	Hydrogen chloride gas.
Fire extinguishing procedures	Use extinguishing media suitable for surrounding materials. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water until well after fire is out. DO NOT get water inside container.
Fire and Explosion Hazards	Flammable/explosive hydrogen gas may be formed upon contact of this product with metals. The sensitivity to impact is not applicable. The sensitivity to static discharge is not applicable. Emits toxic and corrosive fumes under fire conditions.

Section V. Toxicological Properties

Routes of entry	Inhalation and ingestion. Eye contact. Skin contact.
Effects of Acute Exposure	May be harmful by ingestion, inhalation or skin absorption. Target organs: skin, eyes, lungs, respiratory system. 50 ppm (HYDROCHLORIC ACID) is immediately dangerous to life or health.
Eye	Excessive contact may cause eye irritation.
Skin	Excessive contact may cause skin irritation.
Inhalation	May cause respiratory tract irritation.
Ingestion	Ingestion of large amounts may cause gastrointestinal disturbances.

Section V. Toxicological Properties

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Effects of Chronic Overexposure	May cause erosion of the teeth, ulceration of the nose, mouth and gums, bronchitis. Repeated or prolonged skin contact may cause dermatitis or burns. Carcinogenic effects: Not available. Mutagenic effects: Not available. Teratogenic effects: Not available. Toxicity of the product to the reproductive system: Not available. To the best of our knowledge, the chemical, physical, and toxicity of this substance has not been fully investigated.
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Section VI. First Aid Measures

Eye contact	Immediately flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Call a physician.
Skin contact	Immediately flush skin with plenty of water and soap for at least 15 minutes while removing contaminated clothing and shoes. If irritation occurs or persists seek medical attention. Wash contaminated clothing before reusing.
Inhalation	Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Call a physician.
Ingestion	If conscious, wash out mouth with water. Have conscious person drink several glasses of water or milk, repeating if vomiting. DO NOT induce vomiting. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person.

Section VII. Reactivity Data

Stability	Stable. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.
Hazardous decomp. products	Not available.
Incompatibility	Reacts with most common metals to produce hydrogen. Amines, metal oxides, acetic anhydride, beta-propiolactone, vinyl acetate, mercuric sulfate, calcium phosphide, formaldehyde, alkalis, carbonates, bases, sulfuric acid, chlorosulfonic acid, nitric acid, oxidizing agents, cyanides, sulfides, fluorides, phosphides, acetylides, bromides, carbides, silicides, hydroxides, propylene oxide, fluorine, water reactive materials, silver perchlorate, carbon tetrachloride, perchloric acid, 2-aminoethanol, ammonium hydroxide, ethylenediamine, ethyleneimine, oleum, copper and aluminum and their alloys, alkali metals, sulfites.
Reaction Products	Hazardous polymerization will not occur.

Section VIII. Preventive Measures

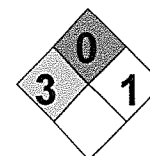
Protective Clothing in case of spill and leak	Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Full suit.
Spill and leak	Evacuate and ventilate the area. Cover with soda ash or lime. This may release carbon dioxide, so use caution. Place in a suitable container and mark for disposal. Wash spill site after material pick up is complete. DO NOT empty into drains. DO NOT touch damaged container or spilled material. Stay upwind: Keep out of low areas.
Waste disposal	According to all applicable regulations. Harmful to aquatic life at high concentrations. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.
Storage and Handling	Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not wash down the drain. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from direct sunlight or strong incandescent light. Keep container tightly closed and dry. Manipulate under an adequate fume hood. May corrode metallic surfaces. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. Wear suitable protective clothing. In case of accident or if you feel unwell, seek medical advice immediately (show the label when possible.).

Section IX. Protective Measures

Protective clothing	Face shield and splash goggles. Impervious gloves (neoprene), apron, coveralls, and/or other resistant protective clothing as required for workplace conditions to prevent contact with hydrochloric acid solutions. Sufficient to protect skin. None required if handled in closed ventilation system. Where required (leak, spill, open handling of liquid) use a NIOSH-approved chemical cartridge respirator for gas below 50 ppm. For gas above 50 ppm or mist, use NIOSH approved self-contained breathing apparatus or air-supplied respirator, both with full facepieces. Have available and use as appropriate: suits, aprons, and boots. Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.
Engineering controls	Use in a chemical fume hood to keep airborne levels below recommended exposure limits. Ventilation should be corrosion proof. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments	Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Use in a chemical fume hood. Handle and open container with care. Container should be opened only by a technically qualified person. Synergistic materials: Not available. RTECS NO: MW4025000 (Hydrochloric acid).
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NFPA

Prepared by MSDS Department/Département de F.S..

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While the company believes the data set forth herein are accurate as of the date hereof, the company makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.